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Terms: **patno=6015299** ([Edit Search](#))

120485 (00) 6015299 January 18, 2000

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6015299

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January 18, 2000

Card edge connector with symmetrical board contacts

REISSUE: January 17, 2002 - Reissue Application filed Ex. Gp.: 2839; Re. S.N. 10/051,925 (O.G. January 7, 2003)

INVENTOR: Walse, Alan S., LaGrange, IL; Lang, Harold Keith, Fox River Grove, IL; Panella, Augusto P., Naperville, IL; Triner, Irvin R., Willowsprings, IL; Tung, Shyh-Lin, Taiping, TW

APPL-NO: 120485 (00)

FILED-DATE: July 22, 1998

GRANTED-DATE: January 18, 2000

ASSIGNEE-AT-ISSUE: Molex Incorporated, Lisle, IL

ASSIGNEE-AFTER-ISSUE: August 31, 1998 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., MOLEX INCORPORATED CHARLES S. COHEN 222 WELLINGTON COURT LISLE ILLINOIS 6053 2, Reel and Frame Number: 009435/0421

LEGAL-REP: Cohen, Charles S.

PUB-TYPE: January 18, 2000 - Utility Patent having no previously published pre-grant publication (A)

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patno=6015299

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Selected file: PLUSPAT

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Query/Command : us6015299/pn

** SS 7: Results 1

Search statement 8

Query/Command : prt fu legalall max

1 / 1 PLUSPAT - @QUESTEL-ORBIT - image
PN - US6015299 A 20000118 [US6015299]
TI - (A) Card edge connector with symmetrical board contacts
PA - (A) MOLEX INC (US)
PAO - Molex Incorporated, Lisle IL [US]
IN - (A) WALSE ALAN S (US); LANG HAROLD KEITH (US); PANELLA AUGUSTO P (US); TRINER IRVIN R (US); TUNG SHYH-LIN (TW)
AP - US12048598 19980722 [1998US-0120485]
PR - US12048598 19980722 [1998US-0120485]
IC - (A) H01R-009/09
EC - H01R-023/00B
H01R-023/70B
PCL - ORIGINAL (O) : 439060000
DT - Corresponding document
CT - USRe26692; US3196377; US3199066; US3399372; US3539976; US3573704; US3871728; US4419626; US4461522; US4548452; US4552420; US4705332; US4707039; US4886474; US4891023; US4917616; US4950172; US4973260; US5024609; US5026292; US5035631; US5035632; US5051099; US5071371; US5082459; US5096435; US5098306; US5156554; US5158471; US5161987; US5162002; US5192220; US5224867; US5249988; US5259768; US5259793; US5309630; US5336111; US5376012; US5393234; US5522737; US5580257; EP414495 A1; EP436943 A1; EP472203 A1; JP58-19884; JP4-79177; JP4-147577; JP4-55764; TW280041; WO9204745
Markstein, "Packaging for High-Speed Logic," pp. 48-50, Electronic Packaging & Production, Sep. 1987.
STG - (A) United States patent
AB - A card edge connector for mounting on a circuit board and removeably receiving a circuit card includes an elongated housing defining a card receiving slot. Numerous terminal receiving cavities intersect and extend to both sides of the slot. Alternate cavities include stamped reference (ground or power) terminals and signal terminals, all having downwardly extending board contacts and upwardly extending spring arms. There are numerous similar sets of face to face contacts, each including a reference contact parallel to and substantially overlying an opposed pair of signal contacts. The upwardly extending reference terminal spring arms include oversize pad portions for reducing crosstalk by increasing coupling between the reference and signal terminals. The circuit paths to the circuit board are in an array symmetrical about the centerline of the circuit card, with parallel inner lines of circuits containing only reference contacts and outer lines of circuits containing only signal contacts.

2/10/04

US 6,015,299

10/051925

1 / 1 LGST - ©EPO
PN - US6015299 A 20000118 [US6015299]
AP - US12048598 19980722 [1998US-0120485]
ACT - 20030107 US/RF-A
REISSUE APPLICATION FILED
EFFECTIVE DATE: 20020117
UP - 2003-22

1 / 1 CRXX - ©CLAIMS/RRX
AN - 3269405
PN - 6,015,299 A 20000118 [US6015299]
PA - Molex Inc
PT - M (Mechanical)
ACT - 20020117 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20030107
REISSUE REQUEST NUMBER: 10/051925
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2839

Reissue Patent Number:

UP - 2003-02
UACT- 2003-01-07

Query/Command : fam us6015299/pn

1 Patent Groups
** SS 8: Results 6

Search statement 9

Query/Command : famstate nonstop

1 / 6 PLUSPAT - ©QUESTEL-ORBIT - image
PN - EP0975055 A1 20000126 [EP-975055]
STG - (A1) Public. Of applic. With search report
TI - (A1) Card edge connector
OTI - (A1) Connecteur de bord de carte
(A1) Leiterplatterandverbinder
PA - (A1) MOLEX INC (US)
IN - (A1) WALSE ALAN S (US); LANG HAROLD KEITH (US); PANELLA AUGUSTO
P (US); TRINER IRVIN R (US); TUNG SHYH-LIN (TW)
IC - (A1) H01R-012/18 H01R-024/00
LA - ENGLISH (ENG)
AP - EP99114374 19990722 [1999EP-0114374]
PR - US12048598 19980722 [1998US-0120485]
EC - H01R-023/00B
H01R-023/70B
DS - AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
AL LT LV MK RO SI
DT - Basic

1 / 1 LEGALI - ©EPO
PN - EP0975055 A1 20000126 [EP-975055]
AP - EP99114374 19990722 [1999EP-0114374]
ACTE- 20000126 EP/AK-A [+]

DESIGNATED CONTRACTING STATES:
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20000126 EP/AX-A [+]
EXTENSION OF THE EUROPEAN PATENT TO
AL;LT;LV;MK;RO;SI

20000913 EP/17P-A [+]
REQUEST FOR EXAMINATION FILED
EFFECTIVE DATE: 20000719

20001011 EP/AKX-A [+]
PAYMENT OF DESIGNATION FEES
DE FR GB IE IT NL

20021016 EP/18W-A [-]
WITHDRAWN
WITHDRAWAL DATE: 20020821

UP - 2003-22

2 / 6 PLUSPAT - ©QUESTEL-ORBIT - image
PN - JP2000100503 A 20000407 [JP2000100503]
STG - (A) Doc. Laid open to publ. Inspec.
TI - (A) CARD EDGE CONNECTOR
PA - (A) MOLEX INC
PAO - (A) MOLEX INC
IN - (A) LANG HAROLD KEITH; PANELLA AUGUSTO P; TUNG SHYH-LIN; TRINER
IRVIN R; WALSE ALAN S
IC - (A) H01R-012/16 H01R-012/18 H01R-107:00
PN2 - JP3185055 B2 20010709 [JP3185055]
STG2- (B2) Grant. Pat. With A from 2500000 on
IC2 - (B2) H01R-012/18
AP - JP23874799 19990722 [1999JP-0238747]
PR - US12048598 19980722 [1998US-0120485]
UP - 2000-22

3 / 6 PLUSPAT - ©QUESTEL-ORBIT
PN - KR2000011884 A 20000225 [KR2000011884]
STG - (A) Unexamined patent application
TI - (A) CARD EDGE CONNECTOR
PA - (A) MOLEX INC (US)
IN - (A) PANELRA AUGESTOPY (US); TRINNERBIN AL (US); WALS ANENES
(US); TUNGSH-RIN (US); RANG HEROLD KISS (US)
IC - (A) H01R-023/68
AP - KR9929685 19990722 [1999KR-0029685]
PR - US12048598 19980722 [1998US-0120485]
UP - 2002-35

4 / 6 PLUSPAT - ©QUESTEL-ORBIT
PN - SG73664 A1 20000620 [SG--73664]
STG - (A1) Patent Application
TI - (A1) Card edge connector
PA - (A1) MOLEX INC
IN - (A1) WALSE ALAN S; LANG HAROLD KEITH; PANELLA AUGUSTO P; TRINER
IRVIN R; TUNG SHYH-LIN
IC - (A1) H01R-009/09
AP - SG9903624 19990722 [1999SG-0003624]

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US 6,015,299


10/051925

PR - US12048598 19980722 [1998US-0120485]
UP - 2000-49

5 / 6 PLUSPAT - @QUESTEL-ORBIT
PN - TW433643 Y 20010501 [TW-433643]
STG - (Y) Granted utility model
TI - (Y) Card edge connector
PA - (Y) MOLEX INC (US)
IN - (Y) TUNG SHYH-LIN (TW); LANG HAROLD KEITH (US); PANELLA AUGUSTO
P (US); TRINER IRVIN R (US); WALSE ALAN S (US)
IC - (Y) H01R-023/70
AP - TW88212265U 19990721 [1999TW-U212265]
PR - US12048598 19980722 [1998US-0120485]
UP - 2001-42

6 / 6 PLUSPAT - @QUESTEL-ORBIT - image
PN - US6015299 A 20000118 [US6015299]
STG - (A) United States patent
TI - (A) Card edge connector with symmetrical board contacts
PA - (A) MOLEX INC (US)
PAO - Molex Incorporated, Lisle IL [US]
IN - (A) WALSE ALAN S (US); LANG HAROLD KEITH (US); PANELLA AUGUSTO P
(US); TRINER IRVIN R (US); TUNG SHYH-LIN (TW)
IC - (A) H01R-009/09
AP - US12048598 19980722 [1998US-0120485]
PR - US12048598 19980722 [1998US-0120485]
EC - H01R-023/00B
H01R-023/70B
PCL - ORIGINAL (O) : 439060000
DT - Corresponding document


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PN - US6015299 A 20000118 [US6015299]
AP - US12048598 19980722 [1998US-0120485]
ACTE- 20030107 US/RF-A
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EFFECTIVE DATE: 20020117
UP - 2003-22

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3	188	(439/\$.cor. and (signal ADJ terminal\$) and (ground\$ ADJ terminal\$)) not (439/\$.cor. and (signal ADJ terminal\$) and (power ADJ terminal\$))	USPAT; US-PGPUB	2004/02/10 13:00